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## Water for Energy Development in Southern New Mexico: A Case Study of the Duke Energy Luna Energy Facility

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# Water for Energy Development in Southern New Mexico: A Case Study of the Duke Energy Luna Energy Facility

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# The Duke Energy Luna Energy Facility

- Disclaimer: Personal Views Only
- 570 MW Gas-Fired Electric Energy Plant
- Location Criteria:
  - Proximity to Interstate Grid
  - Proximity to Natural Gas Pipelines
  - Proximity to Water
  - Proximity to Population Centers
  - Local Incentives









# Water Requirements

- 2500-3000 acre feet per annum
- 4000 afy to handle summer and winter peaks
- redundancy – multiple wells, effluent



# Regulatory and Hydrologic Environment

- Mimbres Basin – a Closed Basin
- 9 Section Block System limits transfers
- Critical Blocks limit drawdowns
- Lack of Sufficient Effluent (Quantity and Quality)
- Avoidance of Public Lands (NEPA)

# Permitting Options

- Work within constraints of established regime
- Challenge regulatory assumptions of block system
- Inter-basin transfers

# Approach Selected: Work Within the System

- Modeling Effort to Assure Long Term Supply
- Address Public Concerns
- Obtain Necessary Permits
- Extensive well field + 10 mile pipeline
- Result: \$ucce\$\$